Joint Polar Satellite System (JPSS) Ground Project
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Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirement Specification (SRS) for Cloud Physical Properties

Block 2.0.0

Goddard Space Flight Center
Greenbelt, Maryland

National Aeronautics and
Space Administration

Joint Polar Satellite System (JPSS) Algorithm Specification Volume I:
Software Requirement Specification (SRS) for Cloud Physical Properties
JPSS Review/Approval Page

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Preface

This document is under JPSS Ground Project configuration control. Once this document is approved, JPSS approved changes are handled in accordance with Class I and Class II change control requirements as described in the JPSS Configuration Management Procedures, and changes to this document shall be made by complete revision.

Any questions should be addressed to:

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Change History Log

Revision	Effective Date	Description of Changes (Reference the CCR & CCB/ERB Approve Date)
Rev-	Aug. 29, 2013	This version incorporates 474-CCR-13-1195 which was approved by JPSS Ground ERB on the effective date shown.
A	Jan 30, 2014	This version incorporates 474-CCR-13-1450 which was approved by JPSS Ground ERB on the effective date shown.
A1	Oct 23, 2014	This version incorporates 474-CCR-14-2091 which was approved by the JPSS Ground ERB for CO10 on the effective date shown.
B	Dec 05, 2014	This version incorporates 474-CCR-14-1721, 474-CCR-14-1741, 474-CCR-14-1781, 474-CCR-14-2110 and 474-CCR-14-2133 which was approved by JPSS Ground ERB on the effective date shown.
C	Mar 29, 2016	This version incorporates 474-CCR-15-2452, 474-CCR-15-2480, 474-CCR-15-2657, and 474-CCR-16-2816 which was approved by JPSS Ground ERB on the effective date shown.
0200D	Sep 22, 2016	This version incorporates 474-CCR-15-2452, 474-CCR-15-2480, 474-CCR-15-2657, 474-CCR-16-2939 and 474-CCR-16-3049 which was approved by JPSS Ground ERB on the effective date shown.

Table of TBDs/TBRs

TBx	Type	ID	Text	Action
None				

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1   Introduction

The Joint Polar Satellite System (JPSS) is the National Oceanic and Atmospheric Administration's (NOAA) next-generation operational Earth observation program that acquires and distributes global environmental data primarily from multiple polar-orbiting satellites. The program plays a critical role in NOAA's mission to understand and predict changes in weather, climate, oceans and coasts, and the space environment, which support the Nation's economy and protect lives and property. The first JPSS satellite mission, the Suomi National Polar-orbiting Partnership (S-NPP) satellite, successfully launched in October 2011. S-NPP, along with the legacy NOAA Polar Operational Environmental Satellites (POES), provides continuous environmental observations. Two JPSS satellites will follow S-NPP: JPSS-1, planned for launch in fiscal year (FY) 2017, with JPSS-2 to follow in FY2021. In the future, the JPSS Polar Follow-On (PFO) provides for two additional missions, JPSS-3 and JPSS-4, as follow-on to the JPSS-2 mission to extend the JPSS Program lifecycle out to 2038.

In addition to the JPSS Program's own satellites operating in the 1330 (±10) Local Time of the Ascending Node (LTAN) orbit, NOAA also leverages mission partner assets for complete global coverage. These partner assets include the Department of Defense (DoD) Defense Meteorological Satellite Program (DMSP) operational weather satellites (in the 1730 - 1930 LTAN orbit), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) Meteorological Operational (Metop) satellites (in the 2130 LTAN orbit) and the Japanese Aerospace Exploration Agency (JAXA) Global Change Observation Mission-Water (GCOM-W) satellite (in the 1330 LTAN orbit). JPSS routes Metop data from McMurdo Station, Antarctica to the EUMETSAT facility in Darmstadt, Germany and EUMETSAT, in turn, provides Metop data to NOAA. For GCOM, JPSS routes the GCOM-W data from Svalbard, Norway to the NOAA Satellite Operations Facility (NSOF) in Suitland, MD, processes GCOM-W data and delivers GCOM-W products to the JPSS users who have JAXA permissions.

Additionally, the JPSS Program provides data acquisition and routing support to the DMSP and the WindSat Coriolis Program. JPSS routes DMSP data from McMurdo Station to the 557th Weather Wing at Offutt Air Force Base in Omaha, NE. After processing, the 557th releases the DMSP data for public consumption over the Internet via the National Geophysical Data Center in Boulder, CO. The JPSS Program provides data routing support to the National Science Foundation (NSF), as well as the National Aeronautics and Space Administration (NASA) Space Communications and Navigation (SCaN)-supported missions, which include the Earth Observing System (EOS). As part of the agreements for the use of McMurdo Station, JPSS provides communications/network services for the NSF between McMurdo Station, Antarctica and Centennial, Colorado.

As a multi-mission ground infrastructure, the JPSS Ground System supports the heterogeneous constellation of the before-mentioned polar-orbiting satellites both within and outside the JPSS Program through a comprehensive set of services as listed in Table 1-1.

Table: 1-1 JPSS Ground System Services

Service	Description
Enterprise Management and Ground Operations	Provides mission management, mission operations, ground operations, contingency management and system sustainment
Flight Operations	Provides launch support and early orbit operations, telemetry and commanding, orbital operations, mission data playback, payload support, flight software upgrade, flight vehicle simulation, and disposal at the end of mission life
Data Acquisition	Provides space/ground communications for acquiring mission data
Data Routing	Provides routing of telemetry, mission and/or operations data through JPSS' global data network
Data Product Generation	Provides the processing of mission data to generate and distribute raw, sensor, environmental, and ancillary data products
Data Product Calibration and Validation	Provides calibration and validation of the data products
Field Terminal Support	Provides development and operational support to the Field Terminal customers

1.1 Identification

This SRS provides requirements for VIIRS cloud products: Cloud Optical Thickness Environmental Data Record (EDR), Cloud Top Pressure EDR, Cloud Top Temperature EDR, Cloud Top Height EDR, Cloud Base Height EDR, Cloud Cover/Layers EDR, Cloud Effective Particle Size EDR, and several cloud-related intermediate products (IPs).

1.2 Algorithm Overview

The cloud products are generated through an inter-related set of processes. The Cloud Top Pressure, Cloud Top Temperature, and Cloud Top Height are generated for day and night, using input atmospheric temperature and moisture profiles and surface emissivity. Multiple algorithms are used for the Cloud Top properties, but mainly two classes called Window Infrared and Cloud Top parameter interpolation. Cloud Base Height is generated by subtracting Cloud Top Thickness from Cloud Top Height, for both water and ice clouds. Cloud Cover/Layers is generated using a clustering algorithm built around Cloud Top Height, and using both microscopic and macroscopic properties. The Cloud Optical Thickness utilizes information from both solar and infrared radiation, distinguishing cirrus and water clouds.

1.3 Document Overview

Section	Description
Section 1	Introduction - Provides a brief overview of the JPSS Ground System and the relevant algorithm, as reference material only.
Section 2	Related Documentation - Lists related documents and identifies them as Parent, Applicable, or Information Documents such as, MOAs, MOUs, technical implementation agreements, as well as Data Format specifications. This section also establishes an order of precedence in the event of conflict between two or more documents.
Section 3	Algorithm Requirements - Provides a summary of the science requirements for the products covered by this volume.
Appendix A	Requirements Attributes - Provides the mapping of requirements to verification methodology and attributes.

2   Related Documentation

The latest JPSS documents can be obtained from URL:
https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm. JPSS Project documents have a document
number starting with 470, 472 or 474 indicating the governing Configuration Control Board
(CCB) (Program, Flight, or Ground) that has the control authority of the document.

2.1   Parent Documents

The following reference document(s) is (are) the Parent Document(s) from which this document
has been derived. Any modification to a Parent Document will be reviewed to identify the
impact upon this document. In the event of a conflict between a Parent Document and the
content of this document, the JPSS Program Configuration Change Board has the final authority
for conflict resolution.

Doc. No.	Document Title
470-00067	Joint Polar Satellite System (JPSS) Ground System Requirements Document (GSRD)
470-00067-02	Joint Polar Satellite System (JPSS) Ground System Requirements Document (GSRD), Volume 2 - Science Product Specification
474-00448-01-01	Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirements Specification (SRS) for the Common Algorithms

2.2   Applicable Documents

The following document(s) is (are) the Applicable Document(s) from which this document has
been derived. Any modification to an Applicable Document will be reviewed to identify the
impact upon this document. In the event of conflict between an Applicable Document and the
content of this document, the JPSS Program Configuration Change Board has the final authority
for conflict resolution.

Doc. No.	Document Title
D0001-M01-S01-012	Joint Polar Satellite System (JPSS) Cloud Top Algorithm Theoretical Basis Document (ATBD)
D0001-M01-S01-013	Joint Polar Satellite System (JPSS) VIIRS Cloud Effective Particle Size and Cloud Optical Thickness Algorithm Theoretical Basis Document (ATBD)
D0001-M01-S01-014	Joint Polar Satellite System (JPSS) VIIRS Cloud Cover/Layers Algorithm Theoretical Basis Document (ATBD)
D0001-M01-S01-015	Joint Polar Satellite System (JPSS) VIIRS Cloud Base Height Algorithm Theoretical Basis Document (ATBD)
474-00448-02-16	Joint Polar Satellite System (JPSS) Algorithm Specification Volume II: Data Dictionary for the Cloud Physical Properties
474-00448-04-16	Joint Polar Satellite System (JPSS) Algorithm Specification Volume IV: Software Requirements Software Parameter File (SRSPF) for the Cloud Physical Properties

2.3   Information Documents

The following documents are referenced herein and amplify or clarify the information presented
in this document. These documents are not binding on the content of this document.

Doc. No.	Document Title
474-00333	Joint Polar Satellite System (JPSS) Ground System (GS) Architecture Description Document (ADD)
474-00054	Joint Polar Satellite System (JPSS) Ground System (GS) Concept of Operations (ConOps)
470-00041	Joint Polar Satellite System (JPSS) Program Lexicon
474-00448-03.16	Joint Polar Satellite System (JPSS) Algorithm Specification Volume III: Operational Algorithm Description (OAD) for the Cloud Physical Properties
429-05-02-42	Joint Polar Satellite System (JPSS) Mission Data Format Control Book for NPP
472-00251	Joint Polar Satellite System (JPSS) Mission Data Format Control Book for JPSS-1
474-00448-01-14	Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirements Specification (SRS) for the Cloud Optical Properties.

3   Algorithm Requirements

3.1   States and Modes

3.1.1   Normal Mode Performance

SRS.01.16_238 The VIIRS Cloud Base Height EDR algorithm shall calculate the cloud base height with the measurement uncertainty of 2 km.

Rationale: The measurement uncertainty value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_691 The VIIRS Cloud Base Height EDR algorithm shall calculate the cloud base height with the vertical reporting interval up to four bases of the cloud layers from surface to 15 km.

Rationale: The vertical reporting interval range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_239 The VIIRS Cloud Cover/Layers EDR algorithm shall calculate the total cloud cover as a fraction of a horizontal cell size surface area with the measurement uncertainty of 0.1 + 0.3 * sin (sensor zenith angle).

Rationale: The measurement uncertainty value was flowed down from the Level 1 and the Level 2 documents. The measurement range can vary from 0 to 1.0 as it is a fraction of a horizontal cell surface area.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_693 The VIIRS Cloud Cover/Layers EDR algorithm shall calculate the cloud cover/layers with the vertical reporting interval up to four cloud layers.

Rationale: The vertical reporting interval range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_240 The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the cloud effective particle size with the measurement precision of greater of 22% of true value, or 1 um for water.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_695 The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the cloud effective particle size with the measurement precision of greater of 28% of true value, or 1 um for ice.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_696 The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the total cloud effective particle size with the measurement accuracy of greater of 22% of true value, or 1 um for water.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_697 The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the total cloud effective particle size with the measurement accuracy of greater of 28% of true value, or 1 um for ice.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_698 The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the cloud effective particle size with the vertical reporting interval up to four cloud layers.

Rationale: The vertical reporting interval range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_241 The VIIRS Cloud Optical Thickness EDR algorithm shall calculate the cloud optical thickness with the measurement precision of greater of 33% (of a measured cloud optical thickness), or 1 Tau.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_700 The VIIRS Cloud Optical Thickness EDR algorithm shall calculate the cloud optical thickness with the measurement accuracy of greater of 24% (of a measured cloud optical thickness), or 1 Tau.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_701 The VIIRS Cloud Optical Thickness EDR algorithm shall calculate the cloud optical thickness with the vertical reporting interval up to four cloud layers.

Rationale: The vertical reporting interval range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_242 The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the measurement precision of 1.0 km when COT > or = 1.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_703 The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the measurement precision of 2.0 km when COT < 1.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_704 The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the measurement accuracy of 1.0 km when COT > or = 1.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_705 The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the measurement accuracy of 2.0 km when COT < 1.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_706 The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the vertical reporting interval up to four tops of cloud layers.

Rationale: The vertical reporting interval range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_243 The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement precision of 100 mb when cloud layers are in between surface and 3 km vertical height and COT > or = 1.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_708 The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement precision of 75 mb when cloud layers are in between 3 km and 7 km vertical height and COT > or = 1.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_709 The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement precision of 50 mb when cloud layers are above 7 km vertical height and COT > or = 1.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_710 The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement accuracy of 100 mb when cloud layers are in between surface and 3 km vertical height and COT > or = 1.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_711 The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement accuracy of 75 mb when cloud layers are in between 3 km and 7 km vertical height and COT > or = 1.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_712 The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement accuracy of 50 mb when cloud layers are above 7 km vertical height and COT > or = 1.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_713 The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the vertical reporting interval up to four tops of cloud layers.

Rationale: The vertical reporting interval range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_244 The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement precision of 3 K when COT > or = 1.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_715 The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement precision of 6 K when COT < 1.

Rationale: The measurement precision value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_716 The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement accuracy of 3 K when COT > or = 1.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_717 The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement accuracy of 6 K when COT < 1.

Rationale: The measurement accuracy value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_718 The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top height with the vertical reporting interval up to four tops of cloud layers.

Rationale: The vertical reporting interval range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_719 The VIIRS Cloud Aggregated Geolocation algorithm shall calculate the geolocation with the horizontal cell size of 7 km.

Rationale: The horizontal cell size for the Cloud Aggregated GEO was flowed down from the Level 1 and Level 2 documents for the Cloud EDRs.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_245 The VIIRS Cloud Cover-Type IP algorithm shall determine and assign cloud types of each cloud cover into one of 5 types; Stratus, Alto Cumulus/Stratus, Cumulus, Cirrus, and Cirrocumulus.

Rationale: The cloud type determination is required to assign a cloud typing as an IP for the cloud cover within each pixel level horizontal cell. The Federal Meteorological Handbook 1B Tables 3-19 and 3-20 classify clouds into 18 types.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_246 The VIIRS Cloud Layer-Type IP algorithm shall determine and assign cloud types of each cloud layer into one of 5 types; Stratus, Alto Cumulus/Stratus, Cumulus, Cirrus, and Cirrocumulus.

Rationale: The cloud type determination is required to assign a cloud typing as an IP for each cloud layer in each pixel level horizontal cell. The Federal Meteorological Handbook 1B Tables 3-19 and 3-20 classify clouds into 18 types.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_247 The VIIRS Cloud Base Height IP algorithm shall compute the cloud base height for each pixel level horizontal cell size.

Rationale: The cloud base height at the pixel level is required as an input IP for the cloud base height EDR generation.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_248 The VIIRS Cloud Top Parameters IP algorithm shall compute the cloud top parameters including cloud top height, cloud top temperature, and cloud top pressure for each pixel level horizontal cell size.

Rationale: The cloud top parameters are used as inputs to down stream processing of cloud top parameter EDRs.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_249 The VIIRS Parallax-Corrected Cloud Mask IP algorithm shall compute the parallax corrected cloud mask IP for each pixel level horizontal cell size.

Rationale: The parallax corrected cloud mask IP is used as a input to down stream processing for other cloud IPs or EDRs.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_250 The VIIRS Parallax-Corrected Cloud Optical Properties IP algorithm shall compute the parallax corrected cloud optical properties for each pixel level horizontal cell size.

Rationale: The parallax corrected cloud optical properties IP is used as a input to down stream processing for other cloud IPs or EDRs.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_251 The VIIRS Parallax-Corrected Cloud Top Parameters IP algorithm shall compute the parallax corrected cloud top parameters including cloud top height, cloud top temperature, and cloud top pressure for each pixel level horizontal cell size.

Rationale: The cloud top parameters are used as inputs to down stream processing of cloud top parameter EDRs.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1037   The VIIRS Cloud Aggregated Geolocation algorithm computation shall have a 3-sigma mapping uncertainty of no larger than 4 km.

Rationale: This drives the geolocation accuracy of the Cloud products using the Cloud Aggregated GEO. The value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: JPSS-1, JPSS-2

SRS.01.16_1064   The Cloud Optical Thickness EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.

Rationale: The value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1065   The Cloud Top Height EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.

Rationale: The value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1066   The Cloud Top Pressure EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.

Rationale: The value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1067   The Cloud Top Temperature EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.

Rationale: The value was flowed down from the Level 1 and the Level 2 documents.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.1.2   Graceful Degradation Mode Performance

SRS.01.16_252 The VIIRS Cloud Top Parameters software shall use NCEP extended forecast data for fallback processing when the relevant NCEP current forecast input is not available.

Rationale: The IP software through its algorithm must generate products using back up data sources to meet the graceful degradation requirement. The relevant NCEP forecasts are Atmospheric Temperature Profile, Surface Pressure, Atmospheric Moisture Profile, Geopotential Height, and Tropopause Height at a VIIRS 750m granulation. These degraded products are not required to meet the algorithm performance requirements.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.2 Algorithm Functional Requirements

3.2.1 Algorithm Science Requirements

SRS.01.16_255 The VIIRS Cloud Base Height EDR software shall incorporate a computing algorithm provided for Cloud Base Height.

Rationale: The EDR software through its computing algorithm must produce Cloud Base Height EDR in accordance with the JPSS VIIRS Cloud Base Height ATBD (D0001-M01-S01-015).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_256 The VIIRS Cloud Cover/Layers EDR software shall incorporate a computing algorithm provided for Cloud Cover/Layers.

Rationale: The EDR software through its computing algorithm must produce Cloud Cover/Layers EDR in accordance with the JPSS VIIRS Cloud Cover/Layers ATBD (D0001-M01-S01-014).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_257 The VIIRS Cloud Effective Particle Size EDR software shall incorporate a computing algorithm provided for Cloud Effective Particle Size.

Rationale: The EDR software through its computing algorithm must produce Cloud Effective Particle Size EDR in accordance with the JPSS VIIRS Cloud Effective Particle Size and Cloud Optical Thickness ATBD (D0001-M01-S01-013).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_258 The VIIRS Cloud Optical Thickness EDR software shall incorporate a computing algorithm provided for Cloud Optical Thickness.

Rationale: The EDR software through its computing algorithm must produce Cloud Optical Thickness EDR in accordance with the JPSS VIIRS Cloud Effective Particle Size and Cloud Optical Thickness ATBD (D0001-M01-S01-013).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_259 The VIIRS Cloud Top Height EDR software shall incorporate a computing algorithm provided for Cloud Top Height.

Rationale: The EDR software through its computing algorithm must produce Cloud Top Height EDR in accordance with the JPSS VIIRS Cloud Top ATBD (D0001-M01-S01-012).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_260 The VIIRS Cloud Top Pressure EDR software shall incorporate a computing algorithm provided for Cloud Top Pressure.

Rationale: The EDR software through its computing algorithm must produce Cloud Top Pressure EDR in accordance with the JPSS VIIRS Cloud Top ATBD (4D0001-M01-S01-012).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_261 The VIIRS Cloud Top Temperature EDR software shall incorporate a computing algorithm provided for Cloud Top Temperature.

Rationale: The EDR software through its computing algorithm must produce Cloud Top Temperature EDR in accordance with the JPSS VIIRS Cloud Top ATBD (D0001-M01-S01-012).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_262 The VIIRS Cloud Cover-Type IP software shall incorporate a computing algorithm provided for cloud cover-type.

Rationale: The IP software through its computing algorithm must produce Cloud Cover-Type IP in accordance with the JPSS VIIRS Cloud Cover/Layers ATBD (D0001-M01-S01-014).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_263 The VIIRS Cloud Layer-Type IP software shall incorporate a computing algorithm provided for classifying Cloud Layer-Type.

Rationale: The IP software through its computing algorithm must produce Cloud Layer-Type IP in accordance with the JPSS VIIRS Cloud Cover/Layers ATBD (D0001-M01-S01-014).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_264 The VIIRS Cloud Base Height IP software shall incorporate a computing algorithm provided for cloud base height.

Rationale: The IP software through its computing algorithm must produce Cloud Base Height IP in accordance with the JPSS VIIRS Cloud Base Height ATBD (D0001-M01-S01-015).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_265 The VIIRS Cloud Top Parameters IP software shall incorporate a computing algorithm provided for Cloud Top Parameters.

Rationale: The IP software through its computing algorithm must produce Cloud Top Parameters IP in accordance with the JPSS VIIRS Cloud Top ATBD (D0001-M01-S01-012).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_266 The VIIRS Parallax-Corrected Cloud Mask IP software shall incorporate a computing algorithm provided for parallax-correction of the Cloud Mask.

Rationale: The IP software through its computing algorithm must produce Parallax-Corrected Cloud Mask IP in accordance with the JPSS VIIRS Cloud Cover/Layers ATBD (D0001-M01-S01-014).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_267 The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall incorporate a computing algorithm provided for parallax-correction of the Cloud Optical Properties.

Rationale: The IP software through its computing algorithm must produce Parallax-Corrected Cloud Optical Properties IP in accordance with the JPSS VIIRS Cloud Cover/Layers ATBD (D0001-M01-S01-014).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_268 The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall incorporate a computing algorithm provided for parallax-correction of the Cloud Top Parameters.

Rationale: The IP software through its computing algorithm must produce Parallax-Corrected Cloud Top Parameters IP in accordance with the JPSS VIIRS Cloud Cover/Layers ATBD (D0001-M01-S01-014).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1052   The VIIRS Cloud Aggregated geolocation software shall incorporate a computing algorithm provided for aggregated geolocation of Cloud products based on the VIIRS M-band geolocation.

Rationale: The GEO software through its computing algorithm must produce VIIRS Cloud Aggregated GEO in accordance with the JPSS VIIRS Cloud Cover/Layers ATBD (D0001-M01-S01-014).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.2.2   Algorithm Exception Handling

SRS.01.16_269 The VIIRS Cloud Base Height EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtEDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the Cloud Base Height EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_270 The VIIRS Cloud Cover/Layers EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverLayersEDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the Cloud Cover/Layers EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_271 The VIIRS Cloud Effective Particle Size EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudEffPartSizeEDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the Cloud Effective Particle Size EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_272 The VIIRS Cloud Optical Thickness EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudOptThickEDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the Cloud Optical Thickness EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_273 The VIIRS Cloud Top Height EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopHgtEDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the Cloud Top Height EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_274 The VIIRS Cloud Top Pressure EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopPressEDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the Cloud Top Pressure EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_275 The VIIRS Cloud Top Temperature EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopTempEDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the Cloud Top Temperature EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_276 The VIIRS Cloud Cover-Type IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverTypeIP><fill>.

Rationale: The IP software through its computing algorithm must fill the Cloud Cover-Type IP values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_277 The VIIRS Cloud Layer-Type IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudLayerTypeIP><fill>.

Rationale: The IP software through its computing algorithm must fill the Cloud Layer-Type IP values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_278 The VIIRS Cloud Base Height IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtIP><fill>.

Rationale: The IP software through its computing algorithm must fill the Cloud Base Height IP values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_279 The VIIRS Cloud Top Parameters IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopParmIP><fill>.

Rationale: The IP software through its computing algorithm must fill the Cloud Top Parameters IP values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_281 The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudOptPropIP><fill>.

Rationale: The IP software through its computing algorithm must fill the Parallax-Corrected Cloud Optical Properties IP values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_282 The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudTopParmIP><fill>.

Rationale: The IP software through its computing algorithm must fill the Parallax-Corrected Cloud Top Parameters IP values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1053   The VIIRS Cloud Aggregated geolocation software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudAggGEO><fill>.

Rationale: The GEO software through its computing algorithm must fill the Cloud Aggregated GEO values based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.3   External Interfaces

3.3.1   Inputs

SRS.01.16_283 The VIIRS Cloud Base Height EDR software shall incorporate inputs as specified in Table 3-1.

Rationale: The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Base Height EDR product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_284 The VIIRS Cloud Cover/Layers EDR software shall incorporate inputs as specified in Table 3-1.

Rationale: The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Cover/Layers EDR product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_285 The VIIRS Cloud Effective Particle Size EDR software shall incorporate inputs as specified in Table 3-1.

Rationale: The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Effective Particle Size EDR product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_286 The VIIRS Cloud Optical Thickness EDR software shall incorporate inputs as specified in Table 3-1.

Rationale: The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Optical Thickness EDR product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_287 The VIIRS Cloud Top Height EDR software shall incorporate inputs as specified in Table 3-1.

Rationale: The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Top Height EDR product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_288 The VIIRS Cloud Top Pressure EDR software shall incorporate inputs as specified in Table 3-1.

Rationale: The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Top Pressure EDR product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_289 The VIIRS Cloud Top Temperature EDR software shall incorporate inputs as specified in Table 3-1.

Rationale: The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Top Temperature EDR product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_290 The VIIRS Cloud Cover-Type IP software shall incorporate inputs as specified in Table 3-1.

Rationale: The IP generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Cover-Type IP product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_291 The VIIRS Cloud Layer-Type IP software shall incorporate inputs as specified in Table 3-1.

Rationale: The IP generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Layer-Type IP product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_292 The VIIRS Cloud Base Height IP software shall incorporate inputs as specified in Table 3-1.

Rationale: The IP generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Base Height IP product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_293 The VIIRS Cloud Top Parameters IP software shall incorporate inputs as specified in Table 3-1.

Rationale: The IP generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Top Parameters IP product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_294 The VIIRS Parallax-Corrected Cloud Mask IP software shall incorporate inputs as specified in Table 3-1.

Rationale: The IP generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Parallax-Corrected Cloud Mask IP product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_295 The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall incorporate inputs as specified in Table 3-1.

Rationale: The IP generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Parallax-Corrected Cloud Optical Properties IP product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_296 The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall incorporate inputs as specified in Table 3-1.

Rationale: The IP generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Parallax-Corrected Cloud Top Parameters IP product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1054   The VIIRS Cloud Aggregated geolocation software shall incorporate inputs as specified in Table 3-1

Rationale: The GEO generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended VIIRS Cloud Aggregated GEO product.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1060   The Cloud Base Height EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1061   The Cloud Cover/Layers EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1062   The Cloud Top Pressure EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical properties (474-00448-02-16).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1063   The Aggregated Cloud GEO software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

The Cloud EDRs are computed with an integrated processing approach as depicted in Figure 3-1. Inputs include Look Up Tables, geolocation information, SDRs, and a number of granulated ancillary data products. The outputs of several of the cloud processes are used as inputs to other cloud processes. At the end of the chain, all of the Cloud EDRs, both optical and physical, are generated by a single software process.

The deliverable data products are described by the SRS that governs the software process that creates them. This is represented in the Figure by horizontal swim lanes. Because of the integrated processing approach, all of the data products which are optical in nature are not contained in the Cloud Optical Properties SRS (474-00448-01-14).   The similar is true for physical data products. Figure 3-1 depicts which deliverable data product is located in each SRS.

Figure: 3-1   Data Flow for All Cloud Processes

Table 3-1 and Figure 3-2 are best viewed together since they describe the processes governed by this SRS in different ways. The figure diagrams the data flowing into, out of, and within the code governed by this SRS. The table lists these same data interactions as well as all downstream dependencies for outputs from this SRS.

Each row in the table describes a single software interaction - data flowing from one software item to another. The data is listed in the first column. The second and third columns include the

short name and mnemonic for the data. Blanks indicate there is no mnemonic. The fourth and fifth columns contain the SRS that generates the data product(s) in the first column, and the SRS that receives those products. The final two columns contain the actual function name in Algorithm Development Library (ADL) that produces those products, and the function that inputs those products. The SRS's titled "Ingest MSD" and "Store/Retrieve" are non-existent SRS's functioning as data handling for the IDPS. The software functions "Store Products" and "Retrieve Products" are similar non-existent functions that operate as IDPS data handling.

Figure: 3-2   Cloud Physical Properties Data Flows
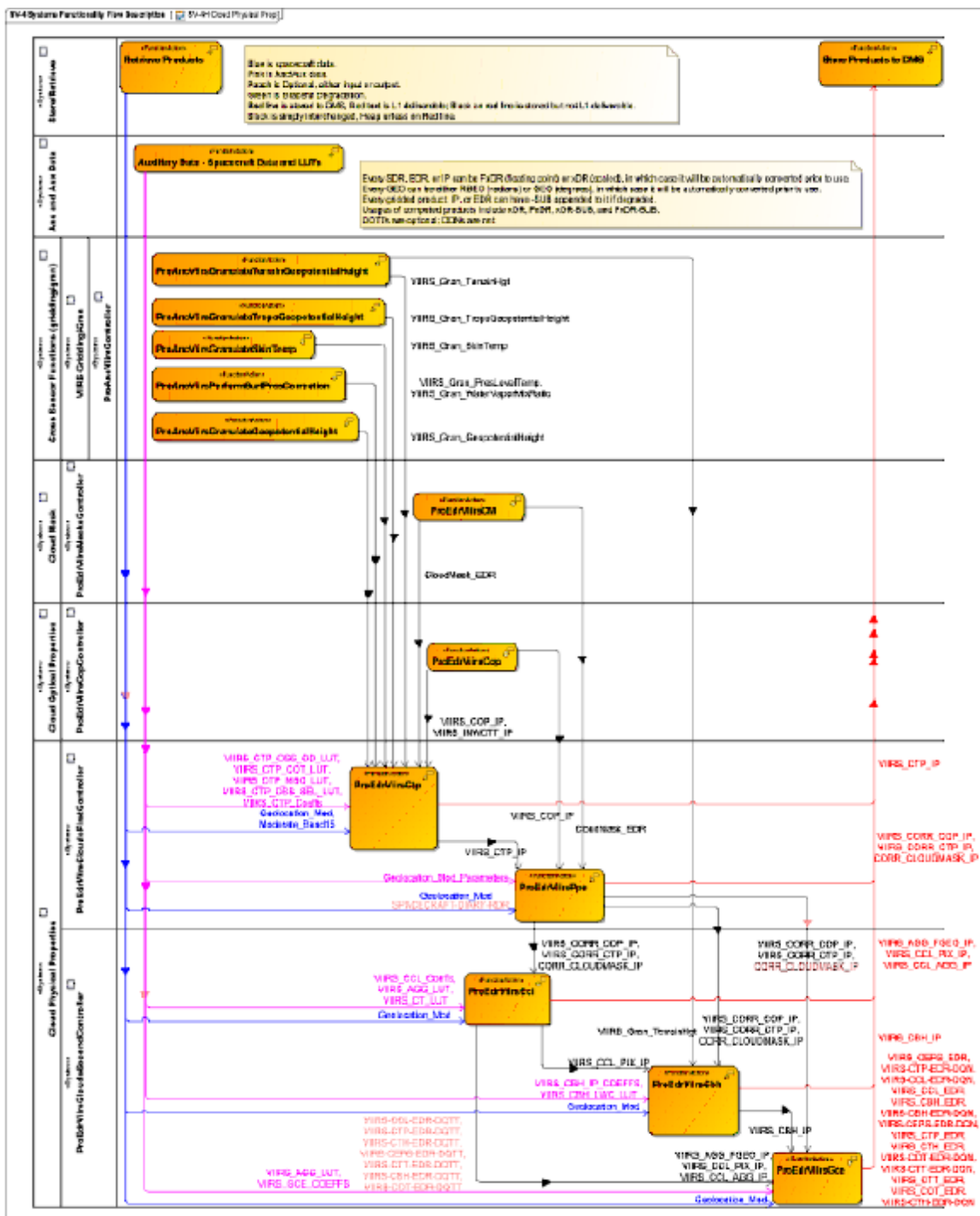
Table: 3-1   Systems Resource Flow Matrix: Cloud Physical Properties

	Data Product Name	Collection Short Name	Mnemonic	Sending SRS	Receiving SRS	Sending Function	Receiving Function
1	•Geolocation_Mod •Moderate_Band15	•VIIRS-MOD-RGEO •VIIRS-M15-SDR	•None •SDRE-VM15-C0030	Store/Retrieve (VIIRS SDR)	Cloud Physical Properties	Retrieve Products	ProEdrViirsCtp
2	•SPACECRAFT-DIARY-RDR	•SPACECRAFT-DIARY-RDR	•RDRE-SCAE-C0030	Store/Retrieve	Cloud Physical Properties	Retrieve Products	ProEdrViirsPpc
3	•VIIRS-CCL-EDR-DQTT •VIIRS-CTP-EDR-DQTT •VIIRS-CTH-EDR-DQTT •VIIRS-CEPS-EDR-DQTT •VIIRS-CTT-EDR-DQTT •VIIRS-CBH-EDR-DQTT •VIIRS-COT-EDR-DQTT	•VIIRS-CCL-EDR-DQTT •VIIRS-CTP-EDR-DQTT •VIIRS-CTH-EDR-DQTT •VIIRS-CEPS-EDR-DQTT •VIIRS-CTT-EDR-DQTT •VIIRS-CBH-EDR-DQTT •VIIRS-COT-EDR-DQTT	•DP_NU-LM2030-000 •DP_NU-LM2030-000 •DP_NU-LM2030-000 •DP_NU-LM2030-000 •DP_NU-LM2030-000 •DP_NU-LM2030-000 •DP_NU-LM2030-000	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsGce
4	•VIIRS_CTP_OSS_OD_LUT •VIIRS_CTP_COT_LUT •VIIRS_CTP_MSC_LUT •VIIRS_CTP_OSS_SEL_LUT •VIIRS_CTP_Coeffs	•VIIRS-CTP-OSS-OD-LUT •VIIRS-CTP-COT-LUT •VIIRS-CTP-MSC-LUT •VIIRS-CTP-OSS-SEL-LUT •VIIRS-CTP-IP-AC	•NP_NU-LM0040-006 •NP_NU-LM0040-004 •NP_NU-LM0040-005 •NP_NU-LM0040-007 •DP_NU-LM2020-016	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCtp
5	•VIIRS_Gran_TropoGeopotentialHeight	•VIIRS-ANC-Tropo-Geopot-Ht-Mod-Gran	•None	Grid Gran	Cloud Physical Properties	ProAncViirsGranulateTropoGeopotentialHeight	ProEdrViirsCtp

	Data Product Name	Collection Short Name	Mnemonic	Sending SRS	Receiving SRS	Sending Function	Receiving Function
6	•VIIRS_Gran_TerrainHgt	•VIIRS-ANC-Surf-Ht-Mod-Gran	•None	Grid Gran	Cloud Physical Properties	ProAncViirsGranulateTerrainGeopotentialHeight	ProEdrViirsCtp
7	•VIIRS_Gran_SkinTemp	•VIIRS-ANC-Temp-Skin-Mod-Gran	•None	Grid Gran	Cloud Physical Properties	ProAncViirsGranulateSkinTemp	ProEdrViirsCtp
8	•VIIRS_Gran_SurfPres	•VIIRS-ANC-Press-Surf-Mod-Gran	•None	Grid Gran	Cloud Physical Properties	ProAncViirsGranulateSurfPres	ProEdrViirsCtp
9	•VIIRS_Gran_PresLevelTemp •VIIRS_Gran_WaterVaporMixRatio	•VIIRS-ANC-Iso-Lev-Temp-Mod-Gran •VIIRS-ANC-Wtr-Vpr-Mix-Ratio-Lev-Mod-Gran	•None •None	Grid Gran	Cloud Physical Properties	ProAncViirsPerformSurfPresCorrection	ProEdrViirsCtp
10	•VIIRS_Gran_GeopotentialHeight	•VIIRS-ANC-Geopot-Ht-Press-Lev-Mod-Gran	•None	Grid Gran	Cloud Physical Properties	ProAncViirsGranulateGeopotentialHeight	ProEdrViirsCtp
11	•VIIRS_COP_IP •VIIRS_INWCTT_IP	•VIIRS-Cd-Opt-Prop-IP •VIIRS-INWCTT-IP	•IMPI_VCOP_R0100 •IMPI_VIWT_R0100	Cloud Optical Properties	Cloud Physical Properties	ProEdrViirsCop	ProEdrViirsCtp
12	•Geolocation_Mod	•VIIRS-MOD-RGEO	•None	Store/Retrieve (Cmn Geo and VIIRS SDR)	Cloud Physical Properties	Retrieve Products	ProEdrViirsPpc
13	•Geolocation_Mod_Parameters	•VIIRS-SDR-GEO-MOD-PARAM-LUT	•NP_NU-LM0233-212	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsPpc
14	•CloudMask_EDR	•VIIRS-CM-EDR	•EDRE-CMIP-C0030	Cloud Mask	Cloud Physical Properties	ProEdrViirsCM	ProEdrViirsPpc
15	•VIIRS_COP_IP	•VIIRS-Cd-Opt-Prop-IP	•IMPI_VCOP_R0100	Cloud Optical Properties	Cloud Physical Properties	ProEdrViirsCop	ProEdrViirsPpc
16	•VIIRS_CTP_IP	•VIIRS-Cd-Top-Parm-IP	•IMPI_VCTP_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsCtp	ProEdrViirsPpc

	Data Product Name	Collection Short Name	Mnemonic	Sending SRS	Receiving SRS	Sending Function	Receiving Function
17	•CloudMask_EDR	•VIIRS-CM-EDR	•EDRE-CMIP-C0030	Cloud Mask	Cloud Physical Properties	ProEdrViirsCM	ProEdrViirsCtp
18	•Geolocation_Mod	•VIIRS-MOD-RGEO	•None	Store/Retrieve (VIIRS SDR)	Cloud Physical Properties	Retrieve Products	ProEdrViirsCbh
19	•VIIRS_CBH_IP_COEFFS •VIIRS_CBH_LWC_LUT	•VIIRS-CBH-IP-AC •VIIRS-CBH-LWC-LUT	•DP_NU-LM2020-012 •NP_NU-LM0233-001	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCbh
20	•VIIRS_Gran_TerrainHgt	•VIIRS-ANC-Surf-Ht-Mod-Gran	•None	Grid Gran	Cloud Physical Properties	ProAncViirsGranulateTerrainGeopotentialHeight	ProEdrViirsCbh
21	•VIIRS_CORR_COP_IP •VIIRS_CORR_CTP_IP •CORR_CLOUDMASK_IP	•VIIRS-Parx-Corr-Cd-Opt-Prop-IP •VIIRS-Parx-Corr-Cd-Top-Parm-IP •VIIRS-Parx-Corr-CM-IP	•IMPI_VPCP_R0100 •IMPI_VPTP_R0100 •IMPI_VPCM_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsPpc	ProEdrViirsCbh
22	•VIIRS_CCL_PIX_IP	•VIIRS-Cd-Layer-Type-IP	•IMPI_VCLT_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsCcl	ProEdrViirsCbh
23	•Geolocation_Mod	•VIIRS-MOD-RGEO	•None	Store/Retrieve (VIIRS SDR)	Cloud Physical Properties	Retrieve Products	ProEdrViirsCcl
24	•VIIRS_CCL_Coeffs •VIIRS_AGG_LUT •VIIRS_CT_LUT	•VIIRS-CCL-IP-AC-Int •VIIRS-CLD-AGG-LUT •VIIRS-CloudType-LUT	•DP_NU-LM2020-013 •NP_NU-LM0233-005 •NP_NU-LM0233-002	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCcl
25	•VIIRS_CORR_COP_IP •VIIRS_CORR_CTP_IP •CORR_CLOUDMASK_IP	•VIIRS-Parx-Corr-Cd-Opt-Prop-IP •VIIRS-Parx-Corr-Cd-Top-Parm-IP •VIIRS-Parx-Corr-CM-IP	•IMPI_VPCP_R0100 •IMPI_VPTP_R0100 •IMPI_VPCM_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsPpc	ProEdrViirsCcl

	Data Product Name	Collection Short Name	Mnemonic	Sending SRS	Receiving SRS	Sending Function	Receiving Function
26	•Geolocation_Mod	•VIIRS-MOD-RGEO	•None	Store/Retrieve (VIIRS SDR)	Cloud Physical Properties	Retrieve Products	ProEdrViirsGce
27	•VIIRS_AGG_LUT •VIIRS_GCE_COEFFS	•VIIRS-CLD-AGG-LUT •VIIRS-GCE-AC	•NP_NU-LM0233-005 •DP_NU-LM2020-017	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsGce
28	•VIIRS_CORR_COP_IP •VIIRS_CORR_CTP_IP •CORR_CLOUDMASK_IP	•VIIRS-Parx-Corr-Cd-Opt-Prop-IP •VIIRS-Parx-Corr-Cd-Top-Parm-IP •VIIRS-Parx-Corr-CM-IP	•IMPI_VPCP_R0100 •IMPI_VPTP_R0100 •IMPI_VPCM_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsPpc	ProEdrViirsGce
29	•CORR_CLOUDMASK_IP	•VIIRS-Parx-Corr-CM-IP	•IMPI_VPCM_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsPpc	ProEdrViirsGce
30	•VIIRS_CBH_IP	•VIIRS-CB-Ht-IP	•IMPI_VCBH_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsCbh	ProEdrViirsGce
31	•VIIRS_AGG_FGEO_IP •VIIRS_CCL_PIX_IP •VIIRS_CCL_AGG_IP	•VIIRS-CLD-AGG-GEO •VIIRS-Cd-Layer-Type-IP •VIIRS-Cd-Cov-Type-IP	•None •IMPI_VCLT_R0100 •IMPI_VICC_R0100	Cloud Physical Properties	Cloud Physical Properties	ProEdrViirsCcl	ProEdrViirsGce
32	•VIIRS_CTP_IP	•VIIRS-Cd-Top-Parm-IP	•IMPI_VCTP_R0100	Cloud Physical Properties	Grid Gran	ProEdrViirsCtp	ProGipCSGranToGridViirsCloudTopPres
33	•VIIRS_CEPS_EDR •VIIRS-CTP-EDR-DQN •VIIRS-CCL-EDR-DQN •VIIRS_CCL_EDR •VIIRS_CBH_EDR •VIIRS-CBH-EDR-DQN	•VIIRS-CEPS-EDR •VIIRS-CTP-EDR-DQN •VIIRS-CCL-EDR-DQN •VIIRS-CCL-EDR •VIIRS-CBH-EDR •VIIRS-CBH-EDR-DQN	•EDRE-VCEP-C0030 •DP_NU-L00510-000 • DP_NU-L00510-000 •EDRE-VCCL-C0030 •EDRE-CLBH-C1030	Cloud Physical Properties	Store/Retrieve	ProEdrViirsGce	Store Products to DMS

	Data Product Name	Collection Short Name	Mnemonic	Sending SRS	Receiving SRS	Sending Function	Receiving Function
	•VIIRS-CEPS-EDR-DQN •VIIRS_CTP_EDR •VIIRS_CTH_EDR •VIIRS-COT-EDR-DQN •VIIRS-CTT-EDR-DQN •VIIRS_CTT_EDR •VIIRS_COT_EDR •VIIRS-CTH-EDR-DQN	•VIIRS-CEPS-EDR-DQN •VIIRS-CTP-EDR •VIIRS-CTH-EDR •VIIRS-COT-EDR-DQN •VIIRS-CTT-EDR-DQN •VIIRS-CTT-EDR •VIIRS-COT-EDR •VIIRS-CTH-EDR-DQN	•DP_NU-L00510-000 •DP_NU-L00510-000 •EDRE-VCLP-C0030 •EDRE-VCTH-C0030 •DP_NU-L00510-000 •DP_NU-L00510-000 •EDRE-VCTT-C0030 •EDRE-VCOT-C0030 •DP_NU-L00510-000				
34	•VIIRS_AGG_FGEO_IP •VIIRS_CCL_PIX_IP •VIIRS_CCL_AGG_IP	•VIIRS-CLD-AGG-GEO •VIIRS-Cd-Layer-Type-IP •VIIRS-Cd-Cov-Type-IP	•None •IMPI_VCLT_R0100 •IMPI_VICC_R0100	Cloud Physical Properties	Store/Retrieve	ProEdrViirsCcl	Store Products to DMS
35	•VIIRS_CBH_IP	•VIIRS-CB-Ht-IP	•IMPI_VCBH_R0100	Cloud Physical Properties	Store/Retrieve	ProEdrViirsCbh	Store Products to DMS
36	•VIIRS_CORR_COP_IP •VIIRS_CORR_CTP_IP •CORR_CLOUDMASK_IP	•VIIRS-Parx-Corr-Cd-Opt-Prop-IP •VIIRS-Parx-Corr-Cd-Top-Parm-IP •VIIRS-Parx-Corr-CM-IP	•IMPI_VPCP_R0100 •IMPI_VPTP_R0100 •IMPI_VPCM_R0100	Cloud Physical Properties	Store/Retrieve	ProEdrViirsPpc	Store Products to DMS
37	•VIIRS_CTP_IP	•VIIRS-Cd-Top-Parm-IP	•IMPI_VCTP_R0100	Cloud Physical Properties	Store/Retrieve	ProEdrViirsCtp	Store Products to DMS

3.3.2 Outputs

SRS.01.16_297 The VIIRS Cloud Base Height EDR software shall generate the VIIRS Cloud Base Height EDR product in conformance with the XML format file in Attachment A.1 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_298 The VIIRS Cloud Cover/Layers EDR software shall generate the VIIRS Cloud Cover/Layers EDR product in conformance with the XML format file in Attachment A.2 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_299 The VIIRS Cloud Effective Particle Size EDR software shall generate the VIIRS Cloud Effective Particle Size EDR product in conformance with the XML format file in Attachment A.3 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_300 The VIIRS Cloud Optical Thickness EDR software shall generate the VIIRS Cloud Optical Thickness EDR product in conformance with the XML format file in Attachment A.4 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_301 The VIIRS Cloud Top Height EDR software shall generate the VIIRS Cloud Top Height EDR product in conformance with the XML format file in Attachment A.5 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_302 The VIIRS Cloud Top Pressure EDR software shall generate the VIIRS Cloud Top Pressure EDR product in conformance with the XML format file in Attachment A.6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_303 The VIIRS Cloud Top Temperature EDR software shall generate the VIIRS Cloud Top Temperature EDR product in conformance with the XML format file in Attachment A.7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_304 The VIIRS Cloud Cover-Type IP software shall generate the VIIRS Cloud Cover-Type IP product in conformance with the XML format file in Attachment A.8 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_305 The VIIRS Cloud Layer-Type IP software shall generate the VIIRS Cloud Layer-Type IP product in conformance with the XML format file in Attachment A.9 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_306 The VIIRS Cloud Base Height IP software shall generate the VIIRS Cloud Base Height IP product in conformance with the XML format file in Attachment A.10 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_307 The VIIRS Cloud Top Parameters IP software shall generate the VIIRS Cloud Top Parameters IP product in conformance with the XML format file in Attachment A.11 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_308 The VIIRS Parallax-Corrected Cloud Mask IP software shall generate the VIIRS Parallax-Corrected Cloud Mask IP product in conformance with the XML format file in Attachment A.12 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_309 The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall generate the VIIRS Parallax-Corrected Cloud Optical Properties IP product in conformance with the XML format file in Attachment A.13 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_310 The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall generate the VIIRS Parallax-Corrected Cloud Top Parameters IP product in conformance with the XML format file in Attachment A.14 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_311 The VIIRS Cloud Aggregated Geolocation software shall generate the Cloud Aggregated Geolocation product in conformance with the XML format file in Attachment A.15 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_313 The VIIRS Cloud Cover-Type IP software shall use the geolocation for the VIIRS M-band.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_314 The VIIRS Cloud Layer-Type IP software shall use the geolocation for the VIIRS M-band.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_315 The VIIRS Cloud Base Height IP software shall use the geolocation for the VIIRS M-band.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_316 The VIIRS Cloud Top Parameters IP software shall use the geolocation for the VIIRS M-band.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_317 The VIIRS Parallax-Corrected Cloud Mask IP software shall use the geolocation for the VIIRS M-band.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_318 The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall use the geolocation for the VIIRS M-band.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_319 The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall use the geolocation for the VIIRS M-band.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1038   The VIIRS Cloud Base Height EDR software shall use the VIIRS Cloud Aggregated geolocation.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1039   The VIIRS Cloud Cover/Layers EDR software shall use the VIIRS Cloud Aggregated geolocation.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1040   The VIIRS Cloud Effective Particle Size EDR software shall use the VIIRS Cloud Aggregated geolocation.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1041   The VIIRS Cloud Optical Thickness EDR software shall use the VIIRS Cloud Aggregated geolocation.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1042   The VIIRS Cloud Top Height EDR software shall use the VIIRS Cloud Aggregated geolocation.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1043   The VIIRS Cloud Top Pressure EDR software shall use the VIIRS Cloud Aggregated geolocation.

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1044   The VIIRS Cloud Top Temperature EDR software shall use the VIIRS Cloud Aggregated geolocation.2

Rationale: The product must be associated with the geolocation to meet the geolocation accuracy requirement.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.4   Science Standards

Not applicable.

3.5   Metadata Output

Not applicable.

3.6   Quality Flag Content Requirements

SRS.01.16_320 The VIIRS Cloud Base Height EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtEDR><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_321 The VIIRS Cloud Cover/Layers EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS

Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverLayersEDR><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_322 The VIIRS Cloud Effective Particle Size EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudEffPartSizeEDR><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_323 The VIIRS Cloud Optical Thickness EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudOptThickEDR><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_324 The VIIRS Cloud Top Height EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopHgtEDR><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_325 The VIIRS Cloud Top Pressure EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopPressEDR><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_326 The VIIRS Cloud Top Temperature EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopTempEDR><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_328 The VIIRS Cloud Layer-Type IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudLayerTypeIP><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_329 The VIIRS Cloud Base Height IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtIP><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_330 The VIIRS Cloud Top Parameters IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopParmIP><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_331 The VIIRS Parallax-Corrected Cloud Mask IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudMaskIP><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_332 The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudOptPropIP><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_333 The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudTopParmIP><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1055 The VIIRS Cloud Aggregated geolocation software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudAggGEO><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.7 Data Quality Notification Requirements

SRS.01.16_1045 The VIIRS Cloud Base Height EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtEDR><notification>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1046 The VIIRS Cloud Cover/Layers EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverLayersEDR><notification>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1047 The VIIRS Cloud Effective Particle Size EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudEffPartSizeEDR><notification>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1048   The VIIRS Cloud Optical Thickness EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudOptThickEDR><notification>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1049   The VIIRS Cloud Top Height EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopHgtEDR><notification>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1050   The VIIRS Cloud Top Pressure EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopPressEDR><notification>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1051   The VIIRS Cloud Top Temperature EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopTempEDR><notification>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

Not applicable.

3.8   Adaptation

Not applicable.

3.9   Provenance Requirements

Not applicable.

3.10   Computer Software Requirements

Not applicable.

3.11 Software Quality Characteristics

Not applicable.

3.12 Design and Implementation Constraints

SRS.01.16_334 The JPSS Common Ground System shall execute the VIIRS Cloud Base Height EDR algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_335 The JPSS Common Ground System shall execute the VIIRS Cloud Cover/Layers EDR algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_336 The JPSS Common Ground System shall execute the VIIRS Cloud Effective Particle Size EDR algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_337 The JPSS Common Ground System shall execute the VIIRS Cloud Optical Thickness EDR algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_338 The JPSS Common Ground System shall execute the VIIRS Cloud Top Height EDR algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_339 The JPSS Common Ground System shall execute the VIIRS Cloud Top Pressure EDR algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_340 The JPSS Common Ground System shall execute the VIIRS Cloud Top Temperature EDR algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_341 The JPSS Common Ground System shall execute the VIIRS Cloud Cover-Type IP algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_342 The JPSS Common Ground System shall execute the VIIRS Cloud Layer-Type IP algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_343 The JPSS Common Ground System shall execute the VIIRS Cloud Base Height IP algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_344 The JPSS Common Ground System shall execute the VIIRS Cloud Top Parameters IP algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_345 The JPSS Common Ground System shall execute the VIIRS Parallax-Corrected Cloud Mask IP algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_346 The JPSS Common Ground System shall execute the VIIRS Parallax-Corrected Cloud Optical Properties IP algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_347 The JPSS Common Ground System shall execute the VIIRS Parallax-Corrected Cloud Top Parameters IP algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.16_1056   The JPSS Common Ground System shall execute the VIIRS Cloud Aggregated geolocation algorithm.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.13 Personnel Related Requirements

Not applicable.

3.14 Training Requirements

Not applicable.

3.15 Logistics Related requirements

Not applicable.

3.16 Other Requirements

Not applicable.

3.17 Packaging Requirements

Not applicable.

3.18 Precedence and Criticality

Not applicable.

Appendix A. Requirements Attributes

The Requirements Attributes Table lists each requirement with CM-controlled attributes including requirement type, mission effectivity, requirement allocation(s), block start and end, method(s) for verifying each requirement, etc.

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_238	The VIIRS Cloud Base Height EDR algorithm shall calculate the cloud base height with the measurement uncertainty of 2 km.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_691	The VIIRS Cloud Base Height EDR algorithm shall calculate the cloud base height with the vertical reporting interval up to four bases of the cloud layers from surface to 15 km.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_239	The VIIRS Cloud Cover/Layers EDR algorithm shall calculate the total cloud cover as a fraction of a horizontal cell size surface area with the measurement uncertainty of 0.1 + 0.3 * sin (sensor zenith angle).	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_693	The VIIRS Cloud Cover/Layers EDR algorithm shall calculate the cloud cover/layers with the vertical reporting interval up to four cloud layers.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_240	The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the cloud effective particle size with the measurement precision of greater of 22% of true value, or 1 um for water.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_695	The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the cloud effective particle size with the measurement precision of greater of 28% of true value, or 1 um for ice.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_696	The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the total cloud effective particle size with the	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
	measurement accuracy of greater of 22% of true value, or 1 um for water.									
SRS.01.16_697	The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the total cloud effective particle size with the measurement accuracy of greater of 28% of true value, or 1 um for ice.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_698	The VIIRS Cloud Effective Particle Size EDR algorithm shall calculate the cloud effective particle size with the vertical reporting interval up to four cloud layers.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_241	The VIIRS Cloud Optical Thickness EDR algorithm shall calculate the cloud optical thickness with the measurement precision of greater of 33% (of a measured cloud optical thickness), or 1 Tau.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_700	The VIIRS Cloud Optical Thickness EDR algorithm shall calculate the cloud optical thickness with the measurement accuracy of greater of 24% (of a measured cloud optical thickness), or 1 Tau.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_701	The VIIRS Cloud Optical Thickness EDR algorithm shall calculate the cloud optical thickness with the vertical reporting interval up to four cloud layers.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_242	The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the measurement precision of 1.0 km when COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_703	The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the measurement precision of 2.0 km when COT < 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_704	The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
	height with the measurement accuracy of 1.0 km when COT > or = 1.									
SRS.01.16_705	The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the measurement accuracy of 2.0 km when COT < 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_706	The VIIRS Cloud Top Height EDR algorithm shall calculate the cloud top height with the vertical reporting interval up to four tops of cloud layers.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_243	The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement precision of 100 mb when cloud layers are in between surface and 3 km vertical height and COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_708	The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement precision of 75 mb when cloud layers are in between 3 km and 7 km vertical height and COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_709	The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement precision of 50 mb when cloud layers are above 7 km vertical height and COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_710	The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement accuracy of 100 mb when cloud layers are in between surface and 3 km vertical height and COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_711	The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement accuracy of	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
	75 mb when cloud layers are in between 3 km and 7 km vertical height and COT > or = 1.									
SRS.01.16_712	The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the measurement accuracy of 50 mb when cloud layers are above 7 km vertical height and COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_713	The VIIRS Cloud Top Pressure EDR algorithm shall calculate the cloud top pressure with the vertical reporting interval up to four tops of cloud layers.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_244	The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement precision of 3 K when COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_715	The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement precision of 6 K when COT < 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_716	The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement accuracy of 3 K when COT > or = 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_717	The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top temperature with the measurement accuracy of 6 K when COT < 1.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_718	The VIIRS Cloud Top Temperature EDR algorithm shall calculate the cloud top height with the vertical reporting interval up to four tops of cloud layers.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_719	The VIIRS Cloud Aggregated Geolocation algorithm shall calculate the geolocation with the horizontal cell size of 7 km.	P	GEO	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_245	The VIIRS Cloud Cover-Type IP algorithm shall determine and assign cloud types of each cloud cover into one of 5 types; Stratus, Alto Cumulus/Stratus, Cumulus, Cirrus, and Cirrocumulus.	P	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_246	The VIIRS Cloud Layer-Type IP algorithm shall determine and assign cloud types of each cloud layer into one of 5 types; Stratus, Alto Cumulus/Stratus, Cumulus, Cirrus, and Cirrocumulus.	P	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_247	The VIIRS Cloud Base Height IP algorithm shall compute the cloud base height for each pixel level horizontal cell size.	P	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_248	The VIIRS Cloud Top Parameters IP algorithm shall compute the cloud top parameters including cloud top height, cloud top temperature, and cloud top pressure for each pixel level horizontal cell size.	P	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_249	The VIIRS Parallax-Corrected Cloud Mask IP algorithm shall compute the parallax corrected cloud mask IP for each pixel level horizontal cell size.	P	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_250	The VIIRS Parallax-Corrected Cloud Optical Properties IP algorithm shall compute the parallax corrected cloud optical properties for each pixel level horizontal cell size.	P	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_251	The VIIRS Parallax-Corrected Cloud Top Parameters IP algorithm shall compute the parallax corrected cloud top parameters including cloud top height, cloud top temperature, and cloud top pressure for each pixel level horizontal cell size.	P	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_1037	The VIIRS Cloud Aggregated Geolocation algorithm computation shall have a 3-sigma mapping uncertainty of no larger than 4 km.	P	GEO	JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_1064	The Cloud Optical Thickness EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_1065	The Cloud Top Height EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_1066	The Cloud Top Pressure EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_1067	The Cloud Top Temperature EDR algorithm shall provide a 3-sigma geolocation mapping uncertainty of 4 km.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA	NA
SRS.01.16_252	The VIIRS Cloud Top Parameters software shall use NCEP extended forecast data for fallback processing when the relevant NCEP current forecast input is not available.	G	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_255	The VIIRS Cloud Base Height EDR software shall incorporate a computing algorithm provided for Cloud Base Height.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_256	The VIIRS Cloud Cover/Layers EDR software shall incorporate a computing algorithm provided for Cloud Cover/Layers.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_257	The VIIRS Cloud Effective Particle Size EDR software shall incorporate a computing algorithm provided for Cloud Effective Particle Size.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_258	The VIIRS Cloud Optical Thickness EDR software shall incorporate a computing algorithm provided for Cloud Optical Thickness.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_259	The VIIRS Cloud Top Height EDR software shall incorporate a computing algorithm provided for Cloud Top Height.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_260	The VIIRS Cloud Top Pressure EDR software shall incorporate a computing algorithm provided for Cloud Top Pressure.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_261	The VIIRS Cloud Top Temperature EDR software shall incorporate a computing algorithm provided for Cloud Top Temperature.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_262	The VIIRS Cloud Cover-Type IP software shall incorporate a computing algorithm provided for cloud cover-type.	Ap	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_263	The VIIRS Cloud Layer-Type IP software shall incorporate a computing algorithm provided for classifying Cloud Layer-Type.	Ap	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_264	The VIIRS Cloud Base Height IP software shall incorporate a computing algorithm provided for cloud base height.	Ap	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_265	The VIIRS Cloud Top Parameters IP software shall incorporate a computing algorithm provided for Cloud Top Parameters.	Ap	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_266	The VIIRS Parallax-Corrected Cloud Mask IP software shall incorporate a computing algorithm provided for parallax-correction of the Cloud Mask.	Ap	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_267	The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall incorporate a computing algorithm provided for parallax-correction of the Cloud Optical Properties.	Ap	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_268	The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall incorporate a computing algorithm provided for parallax-correction of the Cloud Top Parameters.	Ap	IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_1052	The VIIRS Cloud Aggregated geolocation software shall incorporate a computing algorithm provided for aggregated geolocation of Cloud products based on the VIIRS M-band geolocation.	Ap	GEO	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_269	The VIIRS Cloud Base Height EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtEDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_270	The VIIRS Cloud Cover/Layers EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverLayersEDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_271	The VIIRS Cloud Effective Particle Size EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudEffPartSizeEDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_272	The VIIRS Cloud Optical Thickness EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudOptThickEDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_273	The VIIRS Cloud Top Height EDR software shall set <FillField> to <FillValue> according to <FillCondition>	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
	specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopHgtEDR><fill>.									
SRS.01.16_274	The VIIRS Cloud Top Pressure EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopPressEDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_275	The VIIRS Cloud Top Temperature EDR software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopTempEDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_276	The VIIRS Cloud Cover-Type IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverTypeIP><fill>.	E	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_277	The VIIRS Cloud Layer-Type IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudLayerTypeIP><fill>.	E	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_278	The VIIRS Cloud Base Height IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtIP><fill>.	E	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_279	The VIIRS Cloud Top Parameters IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopParmIP><fill>.	E	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_281	The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudOptPropIP><fill>.	E	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_282	The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudTopParmIP><fill>.	E	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1053	The VIIRS Cloud Aggregated geolocation software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudAggGEO><fill>.	E	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_283	The VIIRS Cloud Base Height EDR software shall incorporate inputs as specified in Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_284	The VIIRS Cloud Cover/Layers EDR software shall incorporate inputs as specified in Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_285	The VIIRS Cloud Effective Particle Size EDR software shall incorporate inputs as specified in Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_286	The VIIRS Cloud Optical Thickness EDR software shall incorporate inputs as specified in Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_287	The VIIRS Cloud Top Height EDR software shall incorporate inputs as specified in Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_288	The VIIRS Cloud Top Pressure EDR software shall incorporate inputs as specified in Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_289	The VIIRS Cloud Top Temperature EDR software shall incorporate inputs as specified in Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_290	The VIIRS Cloud Cover-Type IP software shall incorporate inputs as specified in Table 3-1.	I	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_291	The VIIRS Cloud Layer-Type IP software shall incorporate inputs as specified in Table 3-1.	I	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_292	The VIIRS Cloud Base Height IP software shall incorporate inputs as specified in Table 3-1.	I	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_293	The VIIRS Cloud Top Parameters IP software shall incorporate inputs as specified in Table 3-1.	I	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_294	The VIIRS Parallax-Corrected Cloud Mask IP software shall incorporate inputs as specified in Table 3-1.	I	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_295	The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall incorporate inputs as specified in Table 3-1.	I	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_296	The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall incorporate inputs as specified in Table 3-1.	I	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_1054	The VIIRS Cloud Aggregated geolocation software shall incorporate inputs as specified in Table 3-1	I	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1060	The Cloud Base Height EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	Ft	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1061	The Cloud Cover/Layers EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	Ft	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1062	The Cloud Top Pressure EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical properties (474-00448-02-16).	Ft	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1063	The Aggregated Cloud GEO software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	Ft	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_297	The VIIRS Cloud Base Height EDR software shall generate the VIIRS Cloud Base Height EDR product in conformance with the XML format file in Attachment A.1 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_298	The VIIRS Cloud Cover/Layers EDR software shall generate the VIIRS Cloud	F	EDR	S-NPP JPSS-1	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
	Cover/Layers EDR product in conformance with the XML format file in Attachment A.2 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).			JPSS-2						
SRS.01.16_299	The VIIRS Cloud Effective Particle Size EDR software shall generate the VIIRS Cloud Effective Particle Size EDR product in conformance with the XML format file in Attachment A.3 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_300	The VIIRS Cloud Optical Thickness EDR software shall generate the VIIRS Cloud Optical Thickness EDR product in conformance with the XML format file in Attachment A.4 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_301	The VIIRS Cloud Top Height EDR software shall generate the VIIRS Cloud Top Height EDR product in conformance with the XML format file in Attachment A.5 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_302	The VIIRS Cloud Top Pressure EDR software shall generate the VIIRS Cloud Top Pressure EDR product in conformance with the XML format file in Attachment A.6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_303	The VIIRS Cloud Top Temperature EDR software shall generate the VIIRS Cloud Top Temperature EDR product in conformance with the XML format file in Attachment A.7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_304	The VIIRS Cloud Cover-Type IP software shall generate the VIIRS Cloud Cover-Type IP product in conformance with the XML format file in Attachment A.8 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_305	The VIIRS Cloud Layer-Type IP software shall generate the VIIRS Cloud Layer-Type IP product in conformance with the XML format file in Attachment A.9 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_306	The VIIRS Cloud Base Height IP software shall generate the VIIRS Cloud Base Height IP product in conformance with the XML format file in Attachment A.10 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_307	The VIIRS Cloud Top Parameters IP software shall generate the VIIRS Cloud Top Parameters IP product in conformance with the XML format file in Attachment A.11 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_308	The VIIRS Parallax-Corrected Cloud Mask IP software shall generate the VIIRS Parallax-Corrected Cloud Mask IP product in conformance with the XML format file in Attachment A.12 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_309	The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall generate the VIIRS Parallax-Corrected Cloud Optical Properties IP product in conformance with the XML format file in Attachment A.13 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_310	The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall generate the VIIRS Parallax-Corrected Cloud Top Parameters IP product in conformance with the XML format file in Attachment A.14 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_311	The VIIRS Cloud Aggregated Geolocation software shall generate the Cloud Aggregated Geolocation product in conformance with the XML format file in Attachment A.15 of the JPSS Algorithm Specification Vol II: Data Dictionary for Cloud Physical Properties (474-00448-02-16).	F	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_313	The VIIRS Cloud Cover-Type IP software shall use the geolocation for the VIIRS M-band.	Fg	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_314	The VIIRS Cloud Layer-Type IP software shall use the geolocation for the VIIRS M-band.	Fg	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_315	The VIIRS Cloud Base Height IP software shall use the geolocation for the VIIRS M-band.	Fg	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_316	The VIIRS Cloud Top Parameters IP software shall use the geolocation for the VIIRS M-band.	Fg	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_317	The VIIRS Parallax-Corrected Cloud Mask IP software shall use the geolocation for the VIIRS M-band.	Fg	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_318	The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall use the geolocation for the VIIRS M-band.	Fg	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_319	The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall use the geolocation for the VIIRS M-band.	Fg	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1038	The VIIRS Cloud Base Height EDR software shall use the VIIRS Cloud Aggregated geolocation.	Fg	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1039	The VIIRS Cloud Cover/Layers EDR software shall use the VIIRS Cloud Aggregated geolocation.	Fg	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1040	The VIIRS Cloud Effective Particle Size EDR software shall use the VIIRS Cloud Aggregated geolocation.	Fg	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1041	The VIIRS Cloud Optical Thickness EDR software shall use the VIIRS Cloud Aggregated geolocation.	Fg	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1042	The VIIRS Cloud Top Height EDR software shall use the VIIRS Cloud Aggregated geolocation.	Fg	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1043	The VIIRS Cloud Top Pressure EDR software shall use the VIIRS Cloud Aggregated geolocation.	Fg	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_1044	The VIIRS Cloud Top Temperature EDR software shall use the VIIRS Cloud Aggregated geolocation.2	Fg	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_320	The VIIRS Cloud Base Height EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtEDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_321	The VIIRS Cloud Cover/Layers EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverLayersEDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_322	The VIIRS Cloud Effective Particle Size EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudEffPartSizeEDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_323	The VIIRS Cloud Optical Thickness EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudOptThickEDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_324	The VIIRS Cloud Top Height EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
	Physical Properties (474-00448-04-16) <CloudTopHgtEDR><QF>.									
SRS.01.16_325	The VIIRS Cloud Top Pressure EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopPressEDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_326	The VIIRS Cloud Top Temperature EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopTempEDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_328	The VIIRS Cloud Layer-Type IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudLayerTypeIP><QF>.	Q	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_329	The VIIRS Cloud Base Height IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtIP><QF>.	Q	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_330	The VIIRS Cloud Top Parameters IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopParmIP><QF>.	Q	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_331	The VIIRS Parallax-Corrected Cloud Mask IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudMaskIP><QF>.	Q	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_332	The VIIRS Parallax-Corrected Cloud Optical Properties IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudOptPropIP><QF>.	Q	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_333	The VIIRS Parallax-Corrected Cloud Top Parameters IP software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <ParallaxCloudTopParmIP><QF>.	Q	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1055	The VIIRS Cloud Aggregated geolocation software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudAggGEO><QF>.	Q	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1045	The VIIRS Cloud Base Height EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudBaseHgtEDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_1046	The VIIRS Cloud Cover/Layers EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudCoverLayersEDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1047	The VIIRS Cloud Effective Particle Size EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudEffPartSizeEDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1048	The VIIRS Cloud Optical Thickness EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudOptThickEDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1049	The VIIRS Cloud Top Height EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopHgtEDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1050	The VIIRS Cloud Top Pressure EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopPressEDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_1051	The VIIRS Cloud Top Temperature EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Cloud Physical Properties (474-00448-04-16) <CloudTopTempEDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_334	The JPSS Common Ground System shall execute the VIIRS Cloud Base Height EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_335	The JPSS Common Ground System shall execute the VIIRS Cloud Cover/Layers EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_336	The JPSS Common Ground System shall execute the VIIRS Cloud Effective Particle Size EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_337	The JPSS Common Ground System shall execute the VIIRS Cloud Optical Thickness EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_338	The JPSS Common Ground System shall execute the VIIRS Cloud Top Height EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_339	The JPSS Common Ground System shall execute the VIIRS Cloud Top Pressure EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_340	The JPSS Common Ground System shall execute the VIIRS Cloud Top Temperature EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_341	The JPSS Common Ground System shall execute the VIIRS Cloud Cover-Type IP algorithm.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_342	The JPSS Common Ground System shall execute the VIIRS Cloud Layer-Type IP algorithm.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA

Req ID	SRS 16 - Cloud Physical Properties	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Block 2.2.0 VM
SRS.01.16_343	The JPSS Common Ground System shall execute the VIIRS Cloud Base Height IP algorithm.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_344	The JPSS Common Ground System shall execute the VIIRS Cloud Top Parameters IP algorithm.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_345	The JPSS Common Ground System shall execute the VIIRS Parallax-Corrected Cloud Mask IP algorithm.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_346	The JPSS Common Ground System shall execute the VIIRS Parallax-Corrected Cloud Optical Properties IP algorithm.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_347	The JPSS Common Ground System shall execute the VIIRS Parallax-Corrected Cloud Top Parameters IP algorithm.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA
SRS.01.16_1056	The JPSS Common Ground System shall execute the VIIRS Cloud Aggregated geolocation algorithm.	Ai	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	NA